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## Commentary

# Surveillance Programme of Work-related Diseases (WRD) in France

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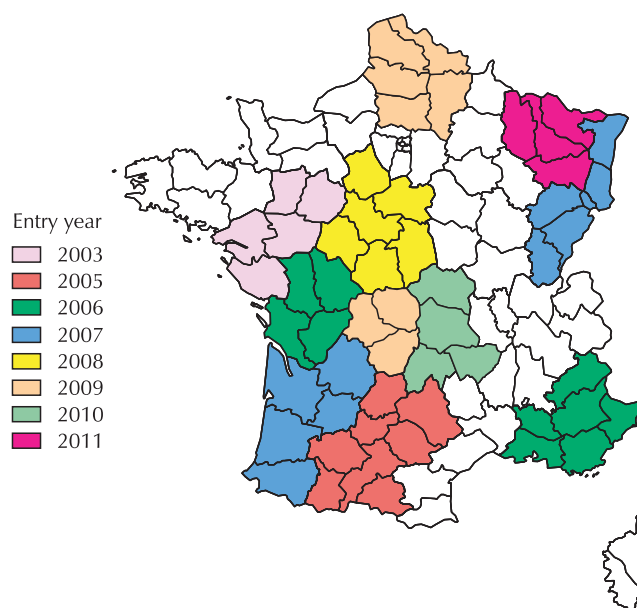
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The surveillance programme of work-related diseases (WRD) is based on a network of occupational physicians who notify all WRD diagnosed during a two-week observation period. The aims are mainly to estimate the prevalence of non-compensated WRD in the working population according to socio economic factors; to determine new indicators of occupational health; to update the lists of compensable occupational diseases; to understand and assess under-compensation and under-notification. The participation rate for occupational physicians is around 33% in 2008. The main WRD are the musculoskeletal disorders, followed by the mental disorders. This 2-week protocol, repeated regularly, provides useful data on frequency of pathologies linked to employment as well as an estimate of unreported WRD subject to compensation or non-compensated WRDs, and the trends of WRDs over the time.

**Key Words :** Surveillance programme, Work related diseases, Occupational physicians

Work-related diseases (WRD) cover all diseases caused by occupation, whether these diseases are subject to compensation or not. In France, financial compensation of occupational diseases depends on 'lists' defining necessary and sufficient conditions for claiming compensation [1]. All physicians have an obligation to report a potential WRD in order to update these lists regularly. These lists have been updated as a result of the agreement between social partners and taking into account changes in scientific knowledge. However, physicians rarely report diseases they think might be linked to working conditions or occupational exposure. Furthermore, these reports cannot be used for epidemiological surveillance due to the lack of data collected for the source population. For this reason, the French



**Fig. 1.** Regions involved in the surveillance programme of work-related diseases in France.

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Institute for Public Health Surveillance, in collaboration with the Medical Inspectorate of the Labour Ministry has developed a protocol for no compensated-WRD monitoring based on a network of occupational physicians. This programme was launched in 2003 in one region, Pays de la Loire, and has been extended to other regions since: 4 regions in 2006, 8 in 2008, 13 in 2011 (Fig. 1). All 22 French regions should be included in the near future [2-5].

The aims of this protocol are mainly to estimate prevalence of nc-WRDs in the working population according to

socio economic factors; to determine new indicators of occupational health; to update the lists of compensable occupational diseases; to understand and assess under-compensation and 'under-reparation' (why and to what extent some diseases are not included in the lists and therefore not subject to compensation).

This protocol is based on a network of occupational physicians who choose to sign up for a two-week observation period repeated every 6 months. During these 2 weeks, the physicians record data such as age, gender, job title, sector of

Table 1. Main results

Year	2006	2007	2008
Regions	4	7	8
Volunteer occupational physicians, n (%)	684 (38%)	909 (33%)	964 (33%)
Employees	73,498	107,392	114,154
Employees with one or more work-related diseases	3,953	6,220	6,542
Work-related diseases prevalence rate	5.1%	5.8%	5.7%

Table 2. Prevalence rates of the main work-related diseases (%)

Year	2006		2007		2008	
	Women (n = 30,897)	Men (n = 42,590)	Women (n = 45,559)	Men (n = 61,806)	Women (n = 49,842)	Men (n = 64,141)
Musculoskeletal disorders	3.7	2.6	3.5	2.9	3.6	2.7
Psychological disorders	1.8	0.9	2.3	1.1	2.4	1.1
Loss of hearing	<0.1	0.7	<0.1	0.7	<0.1	0.6

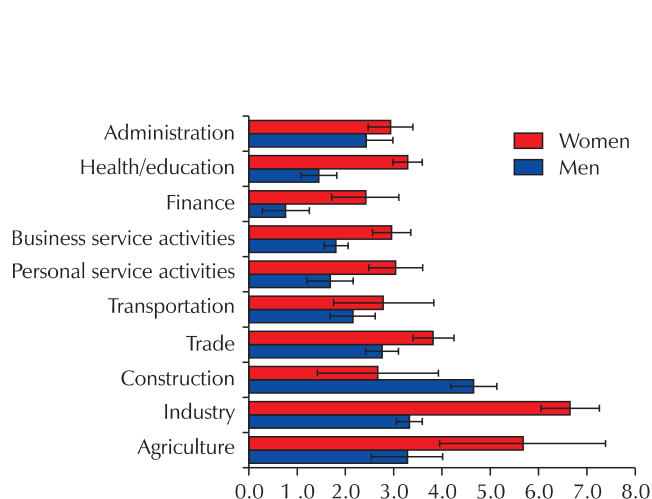


Fig. 2. The musculoskeletal disorders prevalence rate according to the economic sector in 2008.

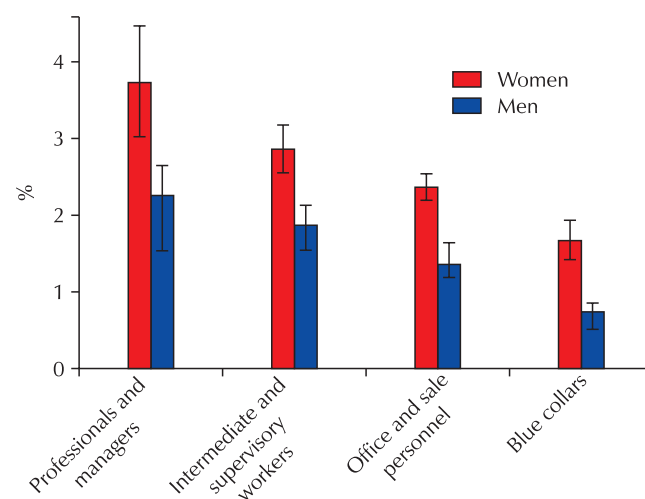


Fig. 3. The prevalence rate of psychological disorders according to the social status in 2008.

work for each worker visited. For each worker with a potential WRD, the physician fills in a one-page report form. Data is collected anonymously. The findings are then analyzed at regional and national level.

Each year between 2006 and 2008, around 33% of occupational physicians volunteered to participate in this protocol (Table 1). The population studied was representative of the employee population for each region considered, especially in their breakdown by sector of work. The nc-WRD prevalence rose from 5.1% in 2006 to 5.8% in 2008. The nc-WRD prevalence rate was significantly different depending on gender: 6.7% among female workers and 5.0% among male workers.

Musculoskeletal disorders (MSDs) were the main cause of nc-WRD, with a difference depending on gender (Table 2). The main sectors of work affected were manufacturing industries and the agricultural sector. Only in the construction sector was the prevalence rate significantly higher among men than women. The findings were similar for all three years considered, which is why we have only shown results for 2008 (Fig. 2). The highest rates were observed among blue-collar workers (7.4% prevalence in women and 3.5% in men). The lowest rates were reported for the professional and manager group (1.1% and 0.7% respectively).

The second cause of nc-WRD was mental disorders. The main sectors of work affected were the financial sector (4.9% in women and 3.5% in men), manufacturing industries (2.9% and 1.5% respectively), construction sector (2.8% and 0.5% respectively) and public administration (2.5% and 1.4% respectively). Depending on social status of the worker, a decreasing gradient was observed between professionals/managers to blue collars, for both women and men (Fig. 3). This gradient was observed for each of the three years, but was more significant in 2008.

The third cause was loss of hearing, which affected men almost exclusively (95%). The main sector of work where this was observed was the manufacturing industry sector especially manufacture of basic metals and manufactured metal products as well as wood and manufactured wood products.

Other diseases observed were skin diseases (contact dermatitis, atopic dermatitis, etc.) (0.5% in women and 0.2% in men) and cardiovascular diseases (hypertension, heart attack, venous insufficiency, etc.) (around 0.1%). For other diseases (gastritis, ulcer, hernia, being overweight, headache, infection, etc.), only rare cases were found and the rate has not been calculated.

In France occupational medicine is compulsory for all employees. Medical visits are compulsory and their frequency depends on indicators of occupational exposure. Each occupational physician knows the workers they will be seeing

each year. French occupational physicians are double-skilled in the sense that they are physicians but they also have a special knowledge of the workplace and work stations and they are aware of the occupational exposure of each worker.

Thanks to the specificities of occupational health in France and a good knowledge of the target population, a prevalence rate for nc-WRD can be directly calculated. The monitoring protocol mentioned above should be rolled-out in all 22 French regions under the Second Occupational Health Plan [6].

The limit however is that occupational medicine only checks on employees at work, who are therefore fit to work. But people with serious diseases, linked to their occupation or not, are not employed and cannot be monitored. Furthermore, some diseases such as cancer, occur several years after exposure, often during retirement. This may lead us to underestimate the prevalence of WRD. Thus other systems are needed to collect data on all aspects of nc-WRD.

This 2-week protocol, when repeated regularly, provides useful data on frequency of pathologies linked to employment as well as an estimate of unreported WRDs subject to compensation or non-compensated WRDs.

In conclusion, this monitoring programme for WRD is simple to follow, which explains a good participation rate for occupational physicians: around 33%. The findings from this programme gave the first prevalence rates of nc-WRDs in France and showed a higher prevalence of nc-WRDs in women for all diseases, with the exception of hearing loss.

The highest rates of MSDs were to be found in the blue collar population, particularly in the manufacturing industry sector. A comparison of our data collected for 3 different MSDs (lumbar rachis, shoulder, wrist-hand-fingers) and data from the French compensation scheme for occupational diseases will be available shortly. Our goal is to evaluate under-reporting of the three types of MSDs [7].

The social status gradient observed for mental disorders (highest rate for professionals and managers, lowest for blue-collar workers) was an unusual finding [8]. Another study called Samotrace has been launched in our department [9-11], in order to gain an estimate of the prevalence of common mental disorders according to occupational category. The methods used for the Samotrace study are different: data self-reported by filling in a questionnaire sent out to employees with a permanent contract who came to their systematic medical visits. Comparison of the 2 studies is ongoing.

## Conflict of Interest

No potential conflict of interest relevant to this article was re-

ported.

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